AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-170

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

In this edition:

* IARU Speadsheets on Small Satellites Available
* Send Your Name to Pluto!
* AO-51 Configuration
* AMSAT Journal Article Timing
* ISS Crew could be on the air for Field Day.
* SSETI Announcement
* Small Payload Conference

SB SAT @ AMSAT $ANS-170.01
IARU Speadsheets on Small Satellites Available
AMSAT News Service Bulletin 170.01
>From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.01

One of the biggest challenges any satellite communications engineer has is to develop a link budget that shows what might work and what wont! At the STEC 2005 Conference held in Aarlborg in April, and previously reported on ANS, Jan King briefly showed his suite of graphic spreadsheets which help satisfy this need.

It is fully annotated with guidance notes and includes graphical representations of orbit data, antenna radiation patterns etc.

As an added benefit he has also produced an on-board power budget spreadsheet and one covering the mass budget.

All of these are now available for download from the link at http://www.amsat.org.uk/iaru

It is anticipated that a short presentation of these exciting tools will be given during the AMSAT-UK Colloquium which will be taking place at the University of Surrey between July 29-31st http://www.uk.amsat.org/Colloquium/

cheers

Graham

[ANS thanks David Johnson, G4DPZ, for the above information]

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SB SAT @ AMSAT $ANS-170.02
Send Your Name to Pluto!

AMSAT News Service Bulletin 170.02
 From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.02

Join the New Horizons team as we unlock the secrets of Pluto, Charon and the Kuiper Belt - sign up to send your name on the New Horizons spacecraft! Names entered on the mission Web site will be recorded onto a special compact disc, which the team plans to mount on the spacecraft before its journey. After signing up you can print a personalized participation certificate.

Visit here for the sign-up form:

http://pluto.jhuapl.edu/ecard/sendName_ecard_content.html

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73 de JoAnne WB9JEJ

[ANS thanks Joanne, WB9JEJ, for the above information]

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SB SAT @ AMSAT $ANS-170.03
AO-51 Configuration

AMSAT News Service Bulletin 170.03
 From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.03

 From the Satellite Software Development Team:

Due to restrictions in the Satellite, there can be no digi functionality on Echo at this time.

Explanation:
Random noise from a receiver that is fed through the demodulator and into the SCC (a sort of smart UART) will cause interrupts to be sent to the CPU. With Echo having 4 or 5 open receivers the number of interrupts was enough to cause the CPU difficulties in getting normal processing done in a timely fashion. Basically, the CPU was locked up trying to handle the interrupts. Echo is operating its SCC ports in a mode that will only pass AX.25 packets beginning with a certain character, which is called 'block' mode. This configuration solved the interrupt problem. For Echo, with the call sign being "PACB or PECHO", only packets beginning with the character 'P' can get through the SCC and generate a CPU interrupt.

A digi packet has the call sign of the destination station first, followed by the satellite (relay) call sign, and then the originator call sign. Therefore, the digi packet will not get through the SCC

unless the destination station call sign begins wit   htheletter'P'.

A great deal of effort was put into solving this problem. This solution is the only one at the present time that has worked well enough to implement in the Satellite.

[ANS thanks Mike, KE4AZN for the above information]

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SB SAT @ AMSAT $ANS-170.04
AMSAT Journal Article Timing

AMSAT News Service Bulletin 170.04
>From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.04

Everyone,

Once again I must notify you that the May-June issue of the Journal will be late. I still am having some problems with the timing of article submissions. Here is the schedule that I want to adhere to:

Odd numbered months of the year - All articles submitted to me no later than mid-week 3 of the month.

Even numbered months of the year - Completed issue PageMaker files submitted to the printer during week 1

(January = month 1, February = month 2 and so on)

Once the Journal is in the hands of the printer my job is done for that issue unless the printer has questions of some kind or if he can't read a file I've sent or something. From that point it's their job to print it and get it out to you as soon as possible.

Unfortunately due to a lot of reasons (all of which are good) articles have not been arriving according to this schedule. This puts the Journal into your hands late. I sincerely apologize for this.

I want you to understand that I take the Journal very seriously and am trying to do the best job my amateurish hands can do. So please bear with me and I will continue to work hard to get the Journal out on time. I spend a great deal of time on the Journal putting it together and I'm trying daily to make it better. I also have a more-than-full-time job to hold down.

Potential authors - Please send me your contributions. I anxiously await them!

73,

Ed Long
WA4SWJ
Editor, The AMSAT Journal

[ANS thanks Ed Long, WA4SWJ, for the above information]

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SB SAT @ AMSAT $ANS-170.05
ISS crew could be on the air for Field Day.
AMSAT News Service Bulletin 170.05
>From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.05

ISS crew could be on the air for Field Day.

International Space Station crew members John Phillips, KE5DRY, and Sergei Krikalev, U5MIR, may be on the air for ARRL Field Day, June 25-26. ISS Ham Radio Project Engineer Kenneth Ransom, N5VHO, at Johnson Space Center, has reviewed potential ISS pass times, and he says a few are favorable for US stations--although some will occur during the very early morning hours. Phillips and Krikalev will use the Amateur Radio on the International Space Station (ARISS) radio gear aboard the spacecraft.

''Hams on the ISS will try to be on for ARRL Field Day,'' Ransom said. ''The crew can make contacts anytime during the 1800 UTC June 25 to 1800 UTC June 26 period as time permits. Most activity will be over North and South America, but stations worldwide should be listening.''

Ransom says the pass times are only recommendations, and there is no guarantee that either Phillips or Krikalev will actually be on the air during any of them. Passes marked by asterisks (*) are recommended as desirable ones for voice contacts with Amateur Radio stations on the ground.

Saturday, June 25	
1826-1834	Hawaii
1852-1902	Southern Chile Argentina
Sunday, June 26	
0743-0804	Canada and NW US
0847-0901	Central and eastern Australia
0919-0938	Southern Canada and NE US
1020-1035	Western Australia
*1053-1115	Alaska, SW Canada and eastern US*
*1110-1130	Caribbean, NE South America*
1211-1223	Eastern Japan
*1226-1248	Alaska, Western US*
*1246-1306	Central South America*
1346-1359	Western Japan
1428-1442	Central Argentina
1606-1617	Southern Chile and Argentina
*1715-1725	Hawaii*

Phillips will operate as NA1SS and handing out ''1 Alfa ISS'' for a report. If Expedition 11 Commander Krikalev gets on the air too, he'll identify as RS0ISS and give the same exchange. In the past, crew members have operated from both the Phase 1 and Phase 2 ARISS stations using 2 meters and 70 cm.

The standard ISS voice frequencies for contacts in ITU Region 2 are 144.49 MHz up and 145.80 MHz down, FM.

If the astronauts can't get on the air to make voice QSOs, the RS0ISS packet station should be on and available for ground stations to work each other via the packet digipeater using ''ARISS'' as the alias for the call sign in UNPROTO mode. Frequencies are 145.99 MHz up and 145.80 MHz down.

ARRL Contest Branch Manager Dan Henderson, N1ND, notes that ISS voice or direct packet contacts with the ISS do not count for bonus satellite contact points because the ISS is not an ''Amateur Radio satellite'' as event rules specify. Packet contacts relayed via the ISS are valid.

''The ISS contacts do not count for satellite credit, since they are point-to-point, whereas the traditional satellite QSO is a relayed Earth-satellite-Earth two-way contact,'' he explained. Field Day has no specific rules relating to ARISS operation because there's no guarantee that the crew will be able to get on the air for the annual exercise.

During Field Day 2004, astronaut Mike Fincke, KE5AIT, operated NA1SS on 2 meters, while Expedition 9 Commander Gennady Padalka, RN3DT, was on the air from RS0ISS on 70 cm. Between them, they racked up more than five dozen QSOs.

[ANS thanks ARRL HQ for the above information]

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SB SAT @ AMSAT $ANS-170.06
SSETI Announcement

AMSAT News Service Bulletin 170.06
>From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
BID: $ANS-170.06

The preliminary pre-launch keps for the Cosmos launch scheduled for August 25th have been announced.

This launch includes the SSETI Express spacecraft that will be carrying an amateur U/S FM transponder.

SSETI1
1 33001U 05066C   05237.44790000 -.00000001 00000-0 10000-4 0   16
2 33001 98.1900 134.5000 0000001   0.0000   0.0000 14.60830000 00013

These are only provisional and maybe refined nearer the launch date!

This satellite is sponsored by the Education Office of the European Space Agency and is the first in a series of student built satellite projects that are underway. Their next project "ESEO" is scheduled for 2007/8 launch into a GTO orbit.

For the SSETI Express programme ESA are very keen to have as many amateurs contributing received downlinked telemetry on 437MHz and 2.4GHz to a central database. They recognise that our "worldwide" network is a unique facility that is not otherwise available to them

A new website giving full details of the telemetry, how to decode it and how to forward it to the SSETI database is being currently being developed and initial information should be made available within the next four weeks.

In the meantime we can further report that the launch is expected to be broadcast live on this "free to air" satellite downlink.

Astra 1 G at 19.2 degrees east:

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Transponder:                1.108
Reception frequency:        12551.50 MHz
Polarization:               Vertical
Symbolrate:                 22Msymb/s
FEC:                        5/6
TS_ID:                      1108
ON_ID:                      1
Service Name:               ESA
Service provider:           ASTRA
Service_ID:                 12140
TXT:                        none
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As this only covers Europe we are also hoping to be able to stream the sound and video over the internet - more news will follow on this nearer the time.

best wishes

Graham

[ANS thanks Graham Shirville for the above information]

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SB SAT @ AMSAT $ANS-170.07
Small Payload Conference

AMSAT News Service Bulletin 170.07
 From AMSAT HQ SILVER SPRING, MD.
June 19, 2005
To All RADIO AMATEURS
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Small Payload Rideshare Conference

As part of the on-going effort to develop points of contact and relationships within the space industry, AMSAT Executive Vice President, Lee McLamb, KU4OS, attended the Small Payload Rideshare Conference sponsored by the National Reconnaissance Office (NRO), the USAF Space and Missile Systems Center/Space Test Program Office (SMC/STP), and the National Aeronautics and Space Administration/Goddard Spaceflight Center (NASA/GSFC). This annual conference is designed to address the issues related to access to space for small payloads, their potential benefits, and the key technologies for achieving affordable access to space. This year's conference was held 6-7 June 2005 in Denver, Colorado.

"This continues to be a very informative conference", reports Lee. He continued, "We are learning where there may be opportunities for mutually beneficial partnerships and how to better coordinate with with them".

Included in the conference were presentations on new small launch vehicles as well as several presentations on secondary payload adapters being developed for US launch vehicles. Lee said, "It will take work, but I see real potential for partnerships that will benefit the Eagle Project."

[ANS thanks Lee McLamb, KU4OS, for the above information]

73,
This week's ANS Editor,
Dee Interdonato, NB2F
NB2F at amsat dot org

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Via the ans mailing list at AMSAT.ORG courtesy of AMSAT-NA.
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